

10/575359

IAP15 Rec'd PCT/PTO 11 APR 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Junji KONDO et al. : **Mail Stop: PCT**

Serial No. NEW : Attorney Docket No. 2006\_0423A

Filed April 11, 2006 :

CHANNEL-ESTIMATING APPARATUS AND  
MIMO COMMUNICATION SYSTEM  
[Corresponding to PCT/JP2005/008576  
Filed April 28, 2005]

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEES FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975

Sir:

Pursuant to the provisions of 37 CFR 1.56, 1.97 and 1.98, Applicants request consideration of the references listed on attached form PTO-1449 and any additional information identified below in paragraph 3. A legible copy of each reference listed on the Form PTO-1449 is enclosed, except a copy is not provided for:

- each U.S. Patent and U.S. Patent application publication;
- each reference previously cited in the international application PCT/\_\_\_\_\_; and/or
- each reference previously cited in prior parent application Serial No. \_\_\_\_\_.

1a.  This Information Disclosure Statement is submitted:

within three months of the filing date (or of entry into the National Stage) of the above-entitled application, or

before the mailing of a first Office Action on the merits or the mailing of a first Office Action after the filing of an RCE,

**and thus no certification and/or fee is required.**

1b.  This Information Disclosure Statement is submitted

after the events of above paragraph 1a and prior to the mailing date of a final Office Action or a Notice of Allowance or an action which otherwise closes prosecution in the application, and thus:

(1)  the certification of paragraph 2 below is provided, **or**

(2)  the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.

1c.  This Information Disclosure Statement is submitted:

after the mailing date of a final Office Action or Notice of Allowance or action which otherwise closes prosecution in the application, and prior to payment of the issue fee, and thus:

**the certification of paragraph 2 below is provided, and**

**the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.**

2. It is hereby certified

- a.  that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Statement, or
- b.  that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in §1.56(c) more than three months prior to the filing of the Statement.

10/575359

IAP15 Rec'd PCT/PTO 11 APR 2006

3.  Consideration of the following list of additional information (including any copending or abandoned U.S. application, prior uses and/or sales, etc.) is requested.
4. For each non-English language reference listed on the attached form PTO-1449, reference is made to:
  - a.  a full or partial English language translation submitted herewith,
  - b.  a foreign patent office search report (in the English language) submitted herewith,
  - c.  the concise explanation contained in the specification of the present application at page 1,
  - d.  the concise explanation set forth in the attached English language abstract,
  - e.  the concise explanation set forth below or on a separate sheet attached to the reference:
5.  A foreign patent office search report citing one or more of the references is enclosed.

Respectfully submitted,

Junji KONDO et al.

By

Jeffrey R. Filipek  
Registration No. 41,471  
Attorney for Applicants

JRF/ck  
Washington, D.C. 20006-1021  
Telephone (202) 721-8200  
Facsimile (202) 721-8250  
April 11, 2006

Sheet 1 of 1

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: April 11, 2006

ATTY DOCKET NO.  
2006\_0423ASERIAL NO.  
NEW

10/575359

APPLICANT  
Junji KONDO et al.FILING DATE  
April 11, 2006

GROUP

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
/LN/	AJ	1 359 684 A1	11/03	EP			
/LN/	AK	1 445 886 A2	08/04	EP			
/LN/	AL	0 893 888 A2	01/99	EP			
/LN/	AM	2001-237751	08/01	JP			Abstract
/LN/	AN	2000-101667	04/00	JP			Abstract

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

/LN/	AO	Siavash Alamouti "A Simple Transmit Diversity Technique for Wireless Communications" IEEE JOURNAL ON SELECT AREAS IN COMMUNICATIONS, VOL. 16, NO. 8, OCTOBER 1998, pp. 1451-1458.
/LN/	AP	Gerard Foschini "Layered Space-time Architecture for Wireless Communication in a Fading Environment When Using Multi-element Antennas" Bell Labs Technical Journal, Autumn 1996, pp. 41-59.
/LN/	AQ	G. Foschini et al., "On Limits of Wireless Communications in a Fading Environment When Using Multiple Antennas" Wireless Personal Communications, 1998, pp. 311-321.

EXAMINER

/Leon Viet Nguyen/

DATE CONSIDERED

10/21/2009